



3736
PATENT
Docket No. 267/032
VM7010755001

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date indicated below with sufficient postage as First Class Mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Deposit: 2/15/05

Signature of Person Certifying: [Signature]
Printed Name: Linda Major

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Majid L. RIAZIAT et al.

Serial No.: 09/940,679

Filed: August 27, 2001

For: **MARKERS AND SYSTEMS FOR
DETECTING SUCH MARKERS (As
Amended)**

Group Art Unit: 3736

Examiner: John P. Lacyk

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 CFR §§ 1.97 and 1.98, the items identified in this Supplemental Information Disclosure Statement ("IDS") are brought to the attention of the Office. The items are listed on the attached forms PTO/SB/08a and PTO/SB/08b.

The items identified in this IDS may or may not be "material" pursuant to 37 CFR § 1.56. The submission thereof by Applicants is not to be construed as an admission that any such patent, publication or other information referred to therein is material or considered to be material (37 CFR § 1.97(h)), or even qualifies as "prior art" under 35 USC § 102 with respect to this invention unless specifically designated by Applicants as such.

1. Timing of the Information Disclosure Statement:

☒ This IDS is believed to be timely in that it is being submitted under 37 CFR § 1.97(b), that is (1) within three months of the filing date of the application, which is not a continued prosecution application filed under § 1.53(d) or (2) within three months of entry of the national stage as set forth in

37 CFR § 1.491; or (3) before the mailing of a first Office action on the merits; or (4) before the mailing of a first Office action after filing a request for continued examination under § 1.114. Thus, no fee is required.

- ☒ However, if the undersigned is in error in this regard, Applicant respectfully requests that the Office consider this IDS as filed under 37 CFR § 1.97(c), if applicable, and charge the fee due under 37 CFR § 1.17(p) to the deposit account referenced below.
- ☐ However, if the undersigned is in error in this regard, Applicant respectfully requests that the Office consider this IDS as filed under 37 CFR § 1.97(c), if applicable, and a statement under 37 CFR § 1.97(e) is included below, thus no fee is required.

☐ This IDS is being submitted under 37 CFR § 1.97(c), that is after mailing of a first Office Action on the merits, but before a Final Action under 37 CFR § 1.113 or a Notice of Allowance under 37 CFR § 1.311.

- ☐ The fee due under 37 CFR § 1.17(p) is submitted herewith.
- ☐ A statement under 37 CFR § 1.97(e) is included below, thus no fee is required. In the event that this IDS is not received before a Final Action or a Notice of Allowance, then Applicant respectfully requests that the Office consider the filing of these papers to be submitted under 37 CFR § 1.97(d) and charge the fee due under 37 CFR § 1.17(p) to the deposit account below.

☐ This IDS is being submitted under 37 CFR § 1.97(d), that is after a Final Action under 37 CFR § 1.113 or a Notice of Allowance under 37 CFR § 1.311, but before payment of the issue fee. A statement under 37 CFR § 1.97(e) is included below. The fee due under 37 CFR § 1.17(p) is submitted herewith.

☐ This IDS is being submitted under 37 CFR § 1.97(i), that is after a Final Action under 37 CFR § 1.113 or a Notice of Allowance under 37 CFR § 1.311, but before payment of the issue fee.

STATEMENT UNDER 37 CFR § 1.97(e):

- ☐ Some items contained in this IDS were cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS.
- ☐ No item contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this statement after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this IDS.

2. Copies of the Cited Items:

- ☒ Copies of all of the items listed on the attached forms PTO/SB/08a and PTO/SB/08b are enclosed.
- ☐ Copies of only the following items listed on the attached forms PTO/SB/08a (Items * and PTO/SB/08b (Items * are enclosed.

- ☐ Copies of the following documents listed in PTO/SB/08a (Item Nos. 10-21) and copies of the following documents listed in PTO/SB/08b (Item Nos. 6-7) were previously cited by the Office or submitted in Information Disclosure Statements in related applications, and accordingly, copies are not included herewith. See 37 C.F.R. § 1.98(d). The Examiner is requested to make these documents of record.

3. Concise Explanation of Relevance:

- ☒ A concise explanation of relevance of the items listed on forms PTO/SB/08a and PTO/SB/08b is not given.
- ☐ A concise explanation of relevance of some of the items listed on forms PTO/SB/08a and PTO/SB/08b is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references (copy attached).

4. Related Applications:

- ☒ Applicant(s) bring to the Office's attention the following related application(s):
U.S. Serial No. 09/178,385 filed October 23, 1998 now U.S. Patent No. 6,279,579; U.S. Serial No. 09/178,383 filed October 23, 1998 now U.S. Patent No. 6,621,889; U.S. Serial No. 09/178,384 filed October 23, 1998 abandoned; U.S. Serial No. 09/712,724 filed November 14, 2000 now U.S. Patent No. 6,690,965; U.S. Serial No. 09/893,122 filed June 26, 2001; U.S. Serial No. 09/940,679 filed August 27, 2001; U.S. Serial No. 10/234,658 filed September 3, 2002; U.S. Serial No. 10/305,416 filed November 25, 2002; U.S. Serial No. 10/327,603 filed December 20, 2002; U.S. Serial No. 10/664,534 filed September 16, 2003; U.S. Serial No. 10/678,741 filed October 3, 2003; U.S. Serial No. 10/957,009 filed September 30, 2004.

5. Conclusion:

Citation of the above documents shall not be construed as:


1. an admission that the documents are necessarily prior art with respect to the instant invention;
2. a representation that a search has been made, other than as described above; and
3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

It is respectfully requested that the Examiner indicate consideration of the cited references by returning a copy of the attached forms PTO/SB/08a and PTO/SB/08b with initials or other appropriate marks. In the unlikely event that the transmittal letter is separated from this document and the U.S. Patent Office determines that an extension and/or other relief is required, Applicants petition for any required

relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-2518** referencing 7010755001. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: 2/14/09

By: 
Gerald Chan
Registration No. 51,541

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 3

Complete if Known

Application Number	09/940,679
Filing Date	August 27, 2001
First Named Inventor	Majid L. RIAZIAT
Art Unit	3736
Examiner Name	John P. Lacyk
Attorney Docket Number	267/032; VM7010755001

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number – Kind Code ² (if known)	Publication Date MM-DD-YY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-3,871,360	03-18-75	Van Horn et al.	
	2	US-3,952,201	04-20-76	Hounsfield	
	3	US-4,031,884	06-28-77	Henzel	
	4	US-4,710,717	12-01-87	Pele et al.	
	5	US-4,853,771	08-01-89	Witriol et al.	
	6	US-4,895,160	01-23-90	Reents	
	7	US-4,971,065	11-20-90	Pearce	
	8	US-4,994,965	02-19-91	Crawford et al.	
	9	US-5,271,055	12-14-93	Hsieh et al.	
	10	US-5,482,042	01-09-96	Fujita	
	11	US-5,513,646	05-07-96	Lehrman	
	12	US-5,565,777	10-15-96	Kanayama et al.	
	13	US-5,582,182	12-10-96	Hillsman	
	14	US-5,588,430	12-31-96	Bova et al.	
	15	US-5,619,995	04-15-97	Lobodzinski	
	16	US-5,622,187	04-22-97	Carol	

FOREIGN PATENT DOCUMENTS

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	17	FI 79458	09-29-89	Seppo Peltola		

Examiner's
SignatureDate
Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

The collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2.0 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 3

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Application Number	09/940,679
Filing Date	August 27, 2001
First Named Inventor	Majid L. RIAZIAT
Art Unit	3736
Examiner Name	John P. Lacyk
Attorney Docket Number	267/032; VM7010755001

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	18	US-5,638,819	06-17-97	Manwaring et al.	
	19	US-5,662,112	09-02-97	Heid	
	20	US-5,764,723	06-09-98	Weinberger et al.	
	21	US-5,771,310	06-23-98	Vannah	
	22	US-5,820,553	10-13-98	Hughes	
	23	US-5,912,656	06-15-99	Tham et al.	
	24	US-5,954,647	09-21-99	Bova et al.	
	25	US-5,993,397	11-30-99	Branson	
	26	US-6,076,005	06-13-00	Sontag et al.	
	27	US-6,144,874	11-07-00	Du	
	28	US-6,144,875	11-07-00	Schweikard et al.	
	29	US-6,185,445 B1	02-06-01	Knüttel	
	30	US-6,185,446 B1	02-06-01	Carlsen, Jr.	
	31	US-6,198,959 B1	03-06-01	Wang	
	32	US-6,272,368 B1	08-07-01	Alexandrescu	
	33	US-6,296,613 B1	10-02-01	Emmenegger et al.	
	34	US-6,300,974 B1	10-09-01	Viala et al.	
	35	US-6,348,058 B1	02-19-02	Melkent et al.	

FOREIGN PATENT DOCUMENTS

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		Number – Kind Code ² (if known)			
	36	US-6,405,072 B1	06-11-02	Cosman	
	37	US-6,434,507 B1	08-13-02	Clayton et al.	
	38	US-6,473,635 B1	10-29-02	Rasche	
	39	US-6,501,981 B1	12-31-02	Schweikard et al.	
	40	US-6,527,443 B1	03-04-03	Vilsmeier et al.	
	41	US-6,611,617 B1	08-26-03	Crampton	
	42	US-6,621,889 B1	09-16-03	Mostafavi	
	43	US-6,724,930 B1	04-20-04	Kosaka et al.	
	44	US-2003/0210812 A1	11-13-03	Khamene et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 5

Complete if Known

Application Number	09/940,679
Filing Date	August 27, 2001
First Named Inventor	Majid L. RIAZIAT
Art Unit	3736
Examiner Name	John P. Lacyk
Attorney Docket Number	267/032; VM7010755001

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher city and/or country where published	T ²
	1.	ADAMS, W.B. et al. "Correlator Compensation Requirements for Passive Time-Delay Estimation with Moving Source or Receivers" IEEE (April, 1980) ASSP-28(2):158-168	
	2.	BALTER, J.M. et al. "Uncertainties in CT-Based Radiation Therapy Treatment Planning Associated with Patient Breathing" Int. J. Radiat. Oncol., Biol., Phys. (August, 1996) 36:167-174	
	3.	BANKMAN, I.N. et al. "Optimal Detection, Classification, and Superposition Resolution in Neural Waveform Recordings" IEEE (August, 1993) 40(8):836-841	
	4.	BELLENGER, N.G. et al. "Left Ventricular Quantification in Heart Failure by Cardiovascular MR Using Prospective Respiratory Navigator Gating: Comparison with Breath-Hold Acquisition" J. Magn. Reson. Imaging (April, 2000) 11:411-417	
	5.	CHO, K. et al. "Development of Respiratory Gated Myocardial SPECT System" J. Nucl. Cardiol. (Jan./Feb., 1999) 6:20-28	
	6.	DAVIES, S.C. et al. "Ultrasound Quantitation of Respiratory Organ Motion in the Upper Abdomen" Br. J. Radiol. (November, 1994) 67:1096-1102	
	7.	EHMAN, R.L. et al. Magnetic Resonance Imaging with Respiratory Gating: Techniques and Advantages" Am. J. Roentgenol (December, 1984) 143:1175-1182	
	8.	FEE, M.S. et al. "Automatic Sorting of Multiple Unit Neuronal Signals in the Presence of Anisotropic and non-Gaussian Variability" J. Neuroscience Methods (1996) 69:175-188	
	9.	FRÖLICH, H. et al. "A Simple Device for Breath-Level Monitoring During CT" Radiology (July, 1985) 156:235	
	10.	HANLEY, J. et al. "Deep Inspiration Breath-Hold Technique for Lung Tumors: The Potential Value of Target Immobilization and Reduced Lung Density in Dose Escalation" Int. J. Radiat. Oncol., Biol. Phys. (October, 1999) 45:603-611	
	11.	HENKELMAN, R.M. et al. "How Important is Breathing in Radiation Therapy of the Thorax?" Int. J. Radiat. Oncol., Biol., Phys. (November, 1982) 8:2005-2010	
	12.	HOFMAN, M.B.M. et al. "MRI of Coronary Arteries: 2D Breath-Hold vs. 3D Respiratory-Gated Acquisition" J. of Comp. Assisted Tomography (Jan./Feb., 1995) 19:56-62	
	13.	IWASAWA, Tae, et al. "Normal In-Plane Respiratory Motion of the Bilateral Hemidiaphragms Evaluated by Sequentially Subtracted Fast Magnetic Resonance Images" Journal of Thoracic Imaging (1999) 14(2):130-134	
	14.	JOHNSON, L.S. et al. "Initial Clinical Experience with a Video-Based Patient Positioning System" Int. J. Radiat. Oncol., Biol. Phys. (August, 1999) 45:205-213	
	15.	KACHELRIESS, Marc, et al. "Electrocardiogram-Correlated Image Reconstruction from Subsecond Spiral Computed Tomography Scans of the Heart" Med. Phys. (December, 1998) 25(12):2417-2431	

Examiner's Signature	Date Considered
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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 2 of 5

Complete if Known

Application Number	09/940,679
Filing Date	August 27, 2001
First Named Inventor	Majid L. RIAZIAT
Art Unit	3736
Examiner Name	John P. Lacyk
Attorney Docket Number	267/032; VM7010755001

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher city and/or country where published	T ²
	16.	KEATLEY, Eric, et al. "Computer Automated Diaphragm Motion Quantification in a Fluoroscopic Movie" Dept. of Medical Physics, Memorial Sloan-Kettering Cancer Center, New York; 3 pgs	
	17.	KIM, W.S., et al. "Extraction of Cardiac and Respiratory Motion Cycles by Use of Projection Data and its Applications to NMR Imaging" Magnetic Resonance in Medicine (1990) 13:25-37	
	18.	KORIN, H.W. et al. "Respiratory Kinematics of the Upper Abdominal Organs: A Quantitative Study" Magn. Reson. Med. (January, 1992) 23:172-178	
	19.	KUBO, Hideo D., et al. "Respiration Gated Radiotherapy Treatment: A Technical Study" Phys. Med. Biol. (1996) 41:83-91	
	20.	KUBO, H. Dale et al. "Potential and Role of a Prototype Amorphous Silicon Array Electronic Portal Imaging Device in Breathing Synchronized Radiotherapy" Med. Phys. (November, 1999) 26(11):2410-2414	
	21.	KUBO, H. Dale, et al. "Breathing-Synchronized Radiotherapy Program at the University of California Davis Cancer Center" Med. Phys. (February, 2000) 27(2):346-353	
	22.	KUBO, H.D. et al. "Compatibility of Varian 2100C Gated Operations with Enhanced Dynamic Wedge and IMRT Dose Delivery" Med. Phys. (August, 2000) 27:1732-1738	
	23.	KUTCHER, G.J. et al. "Control, Correction, and Modeling of Setup Errors and Organ Motion" Semin. Radiat. Oncol. (April, 1995) 5:134-145	
	24.	LETHIMONNIER, F. et al. "Three-Dimensional Coronary Artery MR Imaging Using Prospective Real-Time Respiratory Navigator and Linear Phase Shift Processing: Comparison with Conventional Coronary Angiography" Magn. Reson. Imaging (1999) 17:1111-1120	
	25.	LEWIS, C.E. et al. "Comparison of Respiratory Triggering and Gating Techniques for the Removal of Respiratory Artifacts in MR Imaging" Radiology (September, 1986) 160:803-810	
	26.	LI, Debiao, et al. "Coronary Arteries: Three-Dimensional MR Imaging with Retrospective Respiratory Gating" Radiology (December, 1996) 201(3):857-863	
	27.	LUKER, Gary D., et al. "Ghosting of Pulmonary Nodules with Respiratory Motion: Comparison of Helical and Conventional CT Using an In Vitro Pediatric Model" AJR (November, 1996) 167:1189-1193	
	28.	MAGERAS, G.S. et al. "Respiratory Motion-Induced Treatment Uncertainties" Patras Medical Physics 99 - VI International Conference On Medical Physics, Monduzzi Editore (September, 1999) pp. 33-39	

Examiner's Signature	Date Considered
-------------------------	--------------------

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Sheet 3 of 5

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Application Number	09/940,679
Filing Date	August 27, 2001
First Named Inventor	Majid L. RIAZIAT
Art Unit	3736
Examiner Name	John P. Lacyk
Attorney Docket Number	267/032; VM7010755001

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher city and/or country where published	T ²
	29.	MAGERAS, G.S. "Interventional Strategies for Reducing Respiratory-Induced Motion in External Beam Therapy" The Use of Computers In Radiation Therapy XIIIth International Conference, Heidelberg, Germany (May, 2000) pp. 514-516	
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